

522 Rec'd PCT/PTO 1 6 NOV 1999

FORM PTO-1390
(REV 10-94)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

DOCKET #: 3245-704PUS

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING
UNDER 35 U.S.C. 371**

U.S. APPLICATION NO.

097423911
(If known, see 37 CFR 1.5)

INTERNATIONAL APPLICATION NO.

PCT/DE98/01162

INTERNATIONAL FILING DATE

22 April 1998

PRIORITY DATE CLAIMED

16 May 1997

TITLE OF INVENTION

Method and Installation for Producing Hot Rolled Aluminium Tape Intended for Can Making

APPLICANT(S) FOR DO/EO/US

Reimar FINCK; Jürgen HIRSCH

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

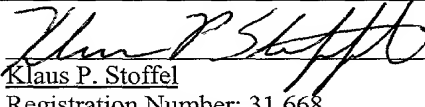
1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An UNEXECUTED oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. Below concern other document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information (*specify*): PCT Publication Sheet, Int'l Preliminary Examination Report, PCT Request, International Search Report

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16 NOV 1999

U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.5)		INTERNATIONAL APPLICATION NO.		ATTORNEY'S DOCKET NUMBER	
09/423911		PCT/DE98/01162		3245-704PUS	
17.[x]The following fees are submitted:					
Basic National Fee (37 CFR 1.492(a)(1)-(5)): Search Report has been prepared by the EPO or JPO\$840.00 International preliminary examination fee paid to USPTO (37 CFR 1.482).....\$670.00 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).....\$760.00 Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO\$970.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4)\$96.00					
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$840	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
Claims	Number Filed	Number Extra	Rate		
Total Claims	4 - 20 =	0	x \$18.00	\$	
Independent Claims	2 - 3 =	0	x \$78.00	\$	
Multiple dependent claim(s) (if applicable)			+ \$260.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$840	
Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28).				\$	
SUBTOTAL =				\$840	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
TOTAL NATIONAL FEE =				\$840	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by the appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$	
TOTAL FEES ENCLOSED				\$840	
Amount to be refunded:				\$	
charged:				\$	
a. [x] One check in the amount of \$840 to cover the above fees is/are enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. 03-2412 in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. [x] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 03-2412. A duplicate copy of this sheet is enclosed.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO: Thomas C. Pontani Cohen, Pontani, Lieberman & Pavane 551 Fifth Avenue, Suite 1210 New York, New York 10176			 Klaus P. Stoffel Registration Number: 31,668 Tel: (212) 687-2770		

09/423911

420 Rec'd PCT/PTO 16 NOV 1999
Attorney Docket # 3245-704PUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re National Phase PCT Application of

Reimar FINCK et al.

International Appln. No.: PCT/DE98/01162

International Filing Date: 22 April 1998

For: Method and Installation for Producing Hot
Rolled Aluminium Tape Intended for Can
Making

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231
BOX PCT

S I R:

Prior to the issuance of a first Office Action and simultaneously with the filing of
the present application, please amend said application as follows:

In the Specification:

Page 1,, delete line 3;

after line 3, insert the following:

[illegible]

Field of the Invention--:

line 6, after “in” insert --a--;

after line 11, insert the following:

--Discussion of the Prior Art--.

Page 2, line 1, delete “earring” and insert --ear or lobe formation--.

Page 3, after line 1, insert the following:

--SUMMARY OF THE INVENTION--.

Page 4, line 13, after “product” insert --,--.

Page 6, after line 23, insert the following:

--BRIEF DESCRIPTION OF THE DRAWING--.

Page 7, prior to line 1, insert the following:

--DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS--;

line 1, delete “It” and insert --The plant--;

line 5, after “material” insert --4--;

line 5, delete “used at 4”;

line 18, after “device” (second occurrence) delete “,”;

line 19, delete "indicated at";

line 19, after "10" delete ",";

line 21, delete ", which is indicated at".

Page 8, line 6, delete "7".

In the Claims:

Please cancel claims 1-4, and add the following new claims:

--5. A process for producing hot-rolled aluminum strip for can making, comprising the steps of:

feeding a feed material into a reversing roughing stage to form a strip;

finish rolling the strip immediately after the roughing stage in a number of hot rolling passes;

suppressing recrystallization of the rolled strip by controlled temperature management of the strip so that last of the hot rolling passes are carried out without recrystallization on a reversing roll stand from coil to coil in a non-critical temperature range of 260°C to 280°C;

coiling the strip into finished coils; and

feeding each finished coil to a continuous pusher type furnace for heat treating the finished coils to a recrystallization temperature of 315°C-320°C.

6. A process according to claim 5, wherein a last three hot rolling passes are carried out without recrystallization.

7. A plant for carrying out a process for producing hot-rolled aluminum strip for can making, comprising:

a reversing roughing stage for aluminum feed material which is used hot, the roughing stage producing rough strip;

means for finish rolling the rough strip, the finish rolling means including a four-high reversing roll stand and a respective winding device arranged on each side of the roll stand for coiling the strip;

means for heat treating the finish coiled strip, the heat treating means including a pusher-type coil furnace and a pallet transport system via which a number of contacting pallets, each holding a coil, is transported through the pusher-type coil furnace by displacement of the pallets; and

means for transporting the coiled strip to the heat treating means, one of winding devices corresponding with the transporting means.

8. A plant according to claim 7, wherein the plant has a yearly production capacity below 250,000 tons.--

In the Abstract:

Page 11, line 2, delete “The invention relates to a” and insert --A--;
line 10, delete “means of”;
delete lines 14, 15 and 16.

REMARKS

The present amendment is being submitted prior to the issuance of a first Office Action and simultaneously with the filing of the present application.

With this amendment applicants have amended the specification, cancelled claims 1-4 and added new claims 5-8, all in an effort to place the application in better condition for examination.

Favorable action on the present application is respectfully requested.

Any additional fees or charges required at this time in connection with the application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

COHEN, PONTANI, LIEBERMAN & PAVANE

By:



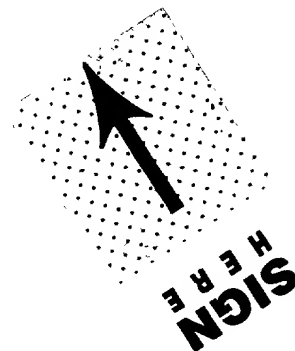
Klaus P. Stoffel

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New York, N.Y. 10176

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16 November 1999

420 Rec'd PCT/PTO 16 NOV 1999

Process and plant for producing hot-rolled aluminum strip for can making

Description

The invention relates to a process and a plant for carrying out the process for producing hot-rolled aluminum strip for can making, especially in rolling plant whose yearly production capacity is below 250,000 tons, having a reversing roughing stage for the feed material, which is used hot, and immediately thereafter finishing rolling of the strip, which is followed by heat treatment of the strip coiled up into coils.

Essentially two processes which are used worldwide are known for the hot production of aluminum strip for can making. In accordance with the one process, good qualities are achieved if aluminum block heated to rolling temperature is initially roughed by reversing in a roughing train, for example a four-high reversing roll stand, and is subsequently finish-rolled in a multi-stand rolling train. In the finish-rolling train, four-high roll stands are normally used, care having to be taken that constant temperature conditions are maintained within the train, in order that the strip, which is coiled up into a coil at the end, obtains the desired optimum rolled structure. The aim is a coiling temperature of about 320°C. If the temperature is set appropriately, the finish-rolled aluminum strip obtains the structure which is known in specialist circles and has a cubic texture which,

Variable	Mean	SD	Min	Max
Age	35.2	12.5	18	65
Gender	0.45	0.50	0	1
Marital status	0.60	0.49	0	1
Education	12.5	2.5	9	16
Income	1500	500	500	3000
Health status	0.70	0.46	0	1
Smoking	0.30	0.46	0	1
Alcohol consumption	0.20	0.40	0	1
Exercise	0.10	0.30	0	1
Stress	0.50	0.50	0	1
Sleep	0.60	0.49	0	1
Appetite	0.70	0.46	0	1
Mood	0.80	0.39	0	1
Energy	0.90	0.28	0	1
Concentration	0.85	0.35	0	1
Memory	0.80	0.39	0	1
Emotion	0.75	0.43	0	1
Behavior	0.70	0.46	0	1
Thought	0.80	0.39	0	1
Feeling	0.75	0.43	0	1
Perception	0.80	0.39	0	1
Attention	0.85	0.35	0	1
Intuition	0.70	0.46	0	1
Imagination	0.60	0.49	0	1
Reason	0.80	0.39	0	1
Logic	0.85	0.35	0	1
Science	0.70	0.46	0	1
Art	0.60	0.49	0	1
Music	0.50	0.50	0	1
Dance	0.40	0.50	0	1
Sports	0.30	0.46	0	1
Gardening	0.20	0.40	0	1
Cooking	0.10	0.30	0	1
Reading	0.05	0.22	0	1
Writing	0.02	0.10	0	1
Traveling	0.01	0.05	0	1
Volunteering	0.00	0.00	0	1
Religion	0.00	0.00	0	1
Politics	0.00	0.00	0	1
Business	0.00	0.00	0	1
Law	0.00	0.00	0	1
Medicine	0.00	0.00	0	1
Engineering	0.00	0.00	0	1
Architecture	0.00	0.00	0	1
Design	0.00	0.00	0	1
Technology	0.00	0.00	0	1
Environment	0.00	0.00	0	1
History	0.00	0.00	0	1
Geography	0.00	0.00	0	1
Language	0.00	0.00	0	1
Mathematics	0.00	0.00	0	1
Science	0.00	0.00	0	1
Art	0.00	0.00	0	1
Music	0.00	0.00	0	1
Dance	0.00	0.00	0	1
Sports	0.00	0.00	0	1
Gardening	0.00	0.00	0	1
Cooking	0.00	0.00	0	1
Reading	0.00	0.00	0	1
Writing	0.00	0.00	0	1
Traveling	0.00	0.00	0	1
Volunteering	0.00	0.00	0	1
Religion	0.00	0.00	0	1
Politics	0.00	0.00	0	1
Business	0.00	0.00	0	1
Law	0.00	0.00	0	1
Medicine	0.00	0.00	0	1
Engineering	0.00	0.00	0	1
Architecture	0.00	0.00	0	1
Design	0.00	0.00	0	1
Technology	0.00	0.00	0	1
Environment	0.00	0.00	0	1
History	0.00	0.00	0	1
Geography	0.00	0.00	0	1
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Mathematics	0.00	0.00	0	1
Science	0.00	0.00	0	1
Art	0.00	0.00	0	1
Music	0.00	0.00	0	1
Dance	0.00	0.00	0	1
Sports	0.00	0.00	0	1
Gardening	0.00	0.00	0	1
Cooking	0.00	0.00	0	1
Reading	0			

The other process which is practiced for producing aluminum strip for can making provides for a reversing rolling mill having coilers arranged on both sides for the finishing rolling of the strip. However, the process has the disadvantage that a nonuniform temperature distribution over the length of the strip is established during the winding and unwinding of the strip, and therefore the desired uniform structure development in the unrolled coil cannot be achieved. For this reason, during this process intermediate annealing is carried out during the subsequent cold-rolling process, and although this improves somewhat the capability of the aluminum strip for can making to be deep drawn, it does not develop the cubic texture in the strip material which is beneficial for the deformation operation.

Whereas the last-mentioned process can be used only to a limited extent for the production of strip for can making, for the reasons outlined, the disadvantage of the process described first lies in the high investment costs, especially for the multi-stand finishing rolling train. For this reason, this process can only be used economically in practical terms if the relevant rolling mill can output a yearly production of more than 500,000 tons per year. For smaller rolling mills, so-called minimills, the known process

cannot be used profitably.

On the basis of the aforementioned disadvantages of the prior art, the object of the present invention is to provide a practicable and economic solution for the production of high-quality strip for can making on hot-rolling mills with a yearly capacity below 250,000 tons, in which the cubic texture which is beneficial for the reshaping of the aluminum strip is developed.

In order to achieve the object, on the basis of a process in which the feed material, which is roughed in a reversing manner, is then immediately finish-rolled, it is proposed to suppress the recrystallization in the rolled material by means of controlled temperature management of the hot strip during the last finishing rolling passes, and specifically to bring about the recrystallization only outside the rolling train, directly following the finishing rolling. It has been shown that an aluminum strip for can making obtains the cubic texture, which is beneficial in the case of multi-stand rolling trains of the generic type, even when no recrystallization takes place in the rolled material during the last finishing passes, that is to say the temperature is kept appropriately low. Instead, the recrystallization takes place only outside the rolling train, following the finishing rolling, and is brought about there by heating the strip coiled up into coils.

Doc 2221 "E. 2221"

Taking into account the finding that the hot process for the production of the aluminum strip for can making is, from many points of view, of decisive importance for the performance of the end product the last three hot-rolling passes are carried out from coil to coil on a finishing rolling mill, specifically for a minimill concept. A finishing rolling mill of this type comprises an individual reversing roll stand with coilers arranged on both sides, so that, in the first place, the high investment costs for the four-high finishing roll stands of a multi-stand rolling train are dispensed with. Since the temperature management and the rolling and pause times - especially in the case of minimill concepts - are critical, the invention provides for the strip to be rolled in the noncritical range from 260°C to 280°C and only then, and utilizing the rolling heat, to heat said strip to recrystallization temperature in a subsequent

Taking into account the finding that the hot process for the production of the aluminum strip for can making is, from many points of view, of decisive importance for the performance of the end product the last three hot-rolling passes are carried out from coil to coil on a finishing rolling mill, specifically for a minimill concept. A finishing rolling mill of this type comprises an individual reversing roll stand with coilers arranged on both sides, so that, in the first place, the high investment costs for the four-high finishing roll stands of a multi-stand rolling train are dispensed with. Since the temperature management and the rolling and pause times - especially in the case of minimill concepts - are critical, the invention provides for the strip to be rolled in the noncritical range from 260°C to 280°C and only then, and utilizing the rolling heat, to heat said strip to recrystallization temperature in a subsequent

A plant for carrying out the process according to the invention is defined in that the finishing rolling is carried out on a four-high reversing roll stand with winding devices arranged on both sides, in that one of the winding devices corresponds to a coil transport device for the finished coil and, on the other side, is connected to a continuous pusher-type furnace for coils, into which the coils can be introduced. The plant therefore essentially comprises two reversing roll stands, one of which, as the roughing roll stand, roughs the block, heated to the rolling temperature, in the conventional way, and the second reversing roll stand having coiler devices arranged on both sides is provided, in which the strip is wound and unwound in a number of reversing passes, in each case forming coils. After the last rolling pass, the finished coil is transferred by a coil transfer device to the coil transport device, with

The continuous pusher-type coil furnace is preferably equipped with a pallet transport system, in which a number of pallets in contact with one another at the ends and holding the coils can be transported through the furnace by displacing these pallets. Such pallet transport systems are known per se; by means of the cyclic displacement of the first pallet by means of a displacement device, for example a hydraulic cylinder, the pallets located in a row one behind another are in each case displaced at the same time, so that as each pallet loaded with a coil is introduced into the furnace, a pallet with a finished, heat-treated coil is ejected on the discharge side of the continuous pusher-type coil furnace. After cooling, the coil is fed to the cold-rolling mill, without any further heat treatment having to be carried out.

The single drawing figure depicts a rough, schematic illustration of a plant according to the invention.

It comprises the four-high reversing roll stand 1, the four-high reversing finishing roll stand 2 following in the rolling direction, and the continuous pressure-type coil furnace 3.

The feed material, used at 4 in the form of a heated aluminum block, is rolled out, as indicated at 5, in a number of reversing passes in the four-high rolling stand 1 of the roughing rolling train to form a rough strip 6, and is immediately introduced into the finishing rolling train comprising the four-high reversing roll stand 2. In the four-high reversing roll stand 2, the rough strip 6 is rolled out in a number of reversing passes 7 to form a finished strip, the strip being coiled up on either side of the four-high reversing roll stand 2 after each rolling pass, as indicated at 8 and 9. At least three hot-rolling passes in accordance with this procedure are preferably provided. After the last rolling pass, the coil B wound up at 9 is transferred by a transfer device (not illustrated) to a coil transport device, indicated at 10, which transports the coil B to the continuous pusher-type coil furnace 3. In front of the end furnace door, which is indicated at 3a, the coil B is deposited on a pallet 11, of which a large number of identical pallets 11 can be displaced through the continuous pusher-type coil furnace 3. Using the displacement device 12, in the form of a piston/cylinder unit, the pallet 11 with the

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coil B is pushed into the furnace with the furnace door 3a open and, at the same time, a pallet 13 with a completely, heat-treated coil B is ejected at the end of the continuous pusher-type coil furnace 3 through the furnace door 3b, which is likewise open. Inside the furnace in the exemplary embodiment 7 illustrated are a number of pallets 11 which are in contact with one another at the ends and have an identical number of coils B which, during their passage through the continuous pusher-type coil furnace 3, are heated to a temperature above the recrystallization temperature of the aluminum strip, that is to say about 315-320°C. By contrast, the reversing rolling passes 7 in the four-high reversing finishing roll stand 2 were carried out at a temperature below the recrystallization temperature of about 260-280°C.

00330" TEEH50

1. A process for producing hot-rolled aluminum strip for can making, especially in rolling plant whose yearly production capacity is below 250,000 tons, having a reversing roughing stage for the feed material, which is used hot, and immediately thereafter finishing rolling of the strip, which is followed by heat treatment of the strip coiled up into coils, wherein, during the last finishing rolling passes, recrystallization in the rolled material is suppressed by means of controlled temperature management of the hot strip and the recrystallization is specifically brought about outside the rolling train, directly following the finishing rolling.

2. The process for producing hot-rolled aluminum strip for can making as claimed in claim 1, wherein the last, preferably three, hot rolling passes in the finishing rolling are carried out without recrystallization on a reversing roll stand from coil to coil in the noncritical temperature range from 260°C to 280°C, and, immediately thereafter and utilizing the rolling heat, each coiled finished coil is fed to a continuous pusher-type furnace for coils, in which the finished coils are heated to recrystallization temperature (315°/320°).

3. A plant for carrying out a process for producing hot-rolled aluminum strip for can making, especially in

rolling plant whose yearly production capacity is below 250,000 tons, having a reversing roughing stage for the feed material, which is used hot, and immediately thereafter finishing rolling, which is followed by heat treatment of the strip coiled up into coils, wherein the finishing rolling is carried out on a four-high reversing roll stand (2) with winding devices (8, 9) arranged on both sides, wherein one of the winding devices (9) corresponds to a coil transport device (10) for the finished coil and, on the other side, is connected to the continuous pusher-type coil furnace (3), into which the coil (B) can be introduced.

4. The plant for carrying out a process for producing hot-rolled aluminum strip for can making as claimed in claim 3, wherein the continuous pusher-type coil furnace (3) is equipped with a pallet transport system in which a number of pallets (11) in contact with one another hold the coils (B), which can be transported through the continuous pusher-type coil furnace (3) by displacing the pallets (11).

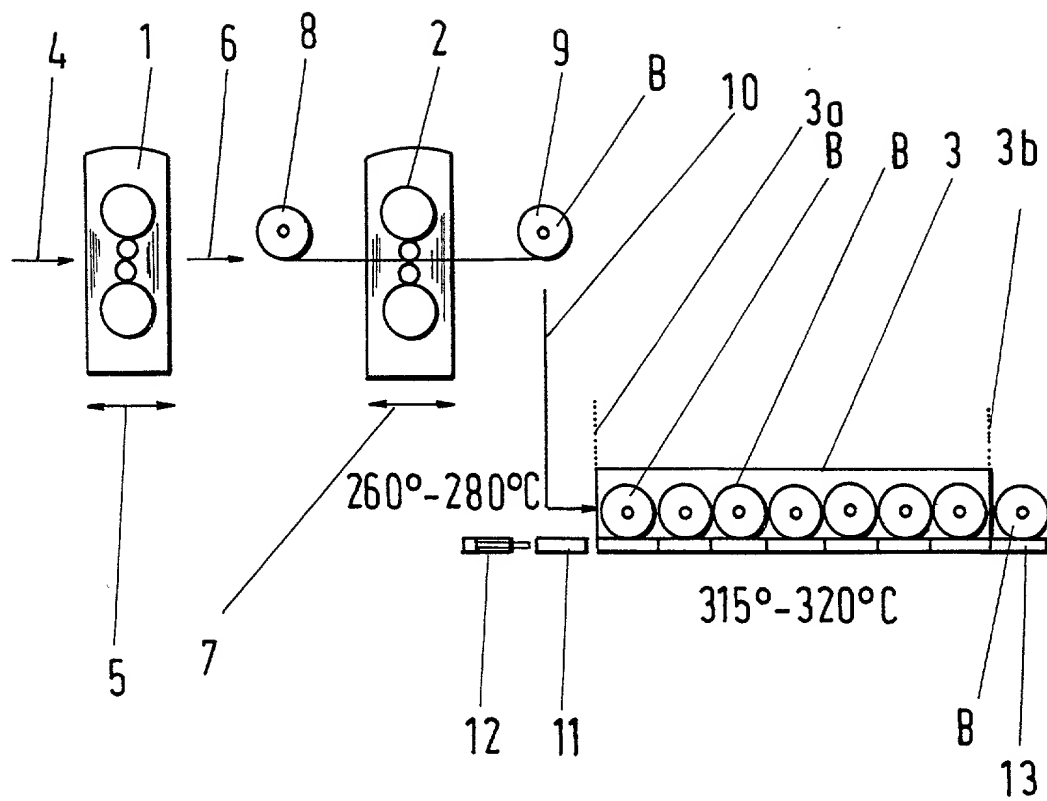
Abstract

The invention relates to a process for producing hot-rolled aluminum strip for can making, especially in rolling plant whose yearly production capacity is below 250,000 tons, having a reversing roughing stage for the feed material, which is used hot, and immediately thereafter finishing rolling of the strip, which is followed by heat treatment of the strip coiled up into coils. In this case, during the last finishing rolling passes, recrystallization in the rolled material is suppressed by means of controlled temperature management of the hot strip and the recrystallization is specifically brought about only outside the rolling train, directly following the finishing rolling.

The invention also relates to a plant for carrying out the process.

The figure is appended.

003230-TECHNO



COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
Includes Reference to PCT International Applications

Attorney's Docket
No. 3245-704PUS

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND INSTALLATION FOR PRODUCING HOT ROLLED ALUMINIUM TAPE INTENDED FOR CAN MAKING

the specification of which (check only one item below)

☐ is attached hereto

☐ was filed as United States application

Serial No. _

on

and was amended

on _ (if applicable).

☒ was filed as PCT international application

Number PCT/DE98/01162

on 22 April 1998

and was amended under PCT Article 19

on (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of the application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

PRIOR FOREIGN/PCT APPLICATIONS AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

Country (if PCT, indicate "PCT")	Application Number	Date of Filing (day, month, year)	Priority Claimed Under 35 U.S.C. 119	
Germany	197 21 866.0	16 May 1997	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
PCT	PCT/DE98/01162	22 April 1998	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO

Combined Declaration for Patent Application and Power of Attorney (Continued)
(Includes Reference to PCT International Applications)

Attorney's Docket
3245-704PUS

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. 120:

U.S. APPLICATIONS			STATUS (check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE		PATENTED	PENDING	ABANDONED
PCT APPLICATIONS DESIGNATING THE U.S.					
PCT APPLICATION NO.	PCT FILING DATE	U.S. SERIAL NUMBERS ASSIGNED (if any)			
PCT/DE98/01162	22 April 1998				

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (List name and registration number)

MYRON COHEN, Reg. No. 17,358; THOMAS C. PONTANI, Reg. No. 29,763; LANCE J. LIEBERMAN, Reg. No. 28,437; MARTIN B. PAVANE, Reg. No. 28,337; MICHAEL C. STUART, Reg. No. 35,698; KLAUS P. STOFFEL, Reg. No. 31,668; EDWARD M. WEISZ, Reg. No. 37,257; CHI K. ENG, Reg. No. 38,870; JULIA S. KIM, Reg. No. 36,567; VINCENT M. FAZZARI, Reg. No. 26,879; ALFRED W. FROEBRICH, Reg. No. 38,887; ANDRES N. MADRID, Reg. No. 40,710; KENT H. CHENG, Reg. No. 33,849; GEORGE WANG, Reg. No. 41,419; JEFFREY M. NAVON, Reg. No. 32,711 and JOHN G. TUTUNJIAN, Reg. No. 39,405.

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Cohen, Pontani, Lieberman & Pavane
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New York, New York 10176

Direct Telephone calls to:
(name and telephone number)
Thomas C. Pontani
(212) 687-2770

201	FULL NAME OF INVENTOR	FAMILY NAME FINCK	FIRST GIVEN NAME Reimar	SECOND GIVEN NAME
	RESIDENCE, CITIZENSHIP	CITY Kempen	STATE OR FOREIGN COUNTRY Germany DEX	COUNTRY OF CITIZENSHIP Germany
	POST OFFICE ADDRESS	POST OFFICE ADDRESS Rheinstr. 49	CITY Kempen	STATE & ZIP CODE/COUNTRY Germany 47906
202	FULL NAME OF INVENTOR	FAMILY NAME HIRSCH	FIRST GIVEN NAME Jürgen	SECOND GIVEN NAME Rainer
	RESIDENCE, CITIZENSHIP	CITY Alfter-Oedekoven	STATE OR FOREIGN COUNTRY Germany DEX	COUNTRY OF CITIZENSHIP Germany
	POST OFFICE ADDRESS	POST OFFICE ADDRESS Mühlenstr. 77	CITY Alfter-Oedekoven	STATE & ZIP CODE/COUNTRY Germany 53347

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
Includes Reference to PCT International Applications

Attorney's Docket
No 3245-704PUS

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND INSTALLATION FOR PRODUCING HOT ROLLED ALUMINIUM TAPE INTENDED FOR CAN MAKING

the specification of which (check only one item below)

☐ is attached hereto

☐ was filed as United States application

Serial No. _

on

and was amended

on _ (if applicable).

☒ was filed as PCT international application

Number PCT/DE98/01162

on 22 April 1998

and was amended under PCT Article 19

on (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of the application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

PRIOR FOREIGN/PCT APPLICATIONS AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

Country (if PCT, indicate "PCT")	Application Number	Date of Filing (day, month, year)	Priority Claimed Under 35 U.S.C. 119	
Germany	197 21 866.0	16 May 1997	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
PCT	PCT/DE98/01162	22 April 1998	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO
			<input type="checkbox"/> YES	<input type="checkbox"/> NO

Combined Declaration for Patent Application and Power of Attorney (Continued)
(Includes Reference to PCT International Applications)

Attorney's Docket
3245-704PUS

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. 120:

U.S. APPLICATIONS			STATUS (check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE		PATENTED	PENDING	ABANDONED
PCT APPLICATIONS DESIGNATING THE U.S.					
PCT APPLICATION NO.	PCT FILING DATE	U.S. SERIAL NUMBERS ASSIGNED (if any)			
PCT/DE98/01162	22 April 1998				

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (*List name and registration number*)

MYRON COHEN, Reg. No. 17,358; THOMAS C. PONTANI, Reg. No. 29,763; LANCE J. LIEBERMAN, Reg. No. 28,437; MARTIN B. PAVANE, Reg. No. 28,337; MICHAEL C. STUART, Reg. No. 35,698; KLAUS P. STOFFEL, Reg. No. 31,668; EDWARD M. WEISZ, Reg. No. 37,257; CHI K. ENG, Reg. No. 38,870; JULIA S. KIM, Reg. No. 36,567; VINCENT M. FAZZARI, Reg. No. 26,879; ALFRED W. FROEBRICH, Reg. No. 38,887; ANDRES N. MADRID, Reg. No. 40,710; KENT H. CHENG, Reg. No. 33,849; GEORGE WANG, Reg. No. 41,419; JEFFREY M. NAVON, Reg. No. 32,711 and JOHN G. TUTUNJIAN, Reg. No. 39,405.

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New York, New York 10176

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(name and telephone number)
Thomas C. Pontani
(212) 687-2770

201	FULL NAME OF INVENTOR	FAMILY NAME FINCK	FIRST GIVEN NAME Reimar	SECOND GIVEN NAME
	RESIDENCE, CITIZENSHIP	CITY Kempen	STATE OR FOREIGN COUNTRY Germany	COUNTRY OF CITIZENSHIP Germany
	POST OFFICE ADDRESS	POST OFFICE ADDRESS Rheinstr. 49	CITY Kempen	STATE & ZIP CODE/COUNTRY Germany 47906
202	FULL NAME OF INVENTOR	FAMILY NAME HIRSCH	FIRST GIVEN NAME Jürgen	SECOND GIVEN NAME
	RESIDENCE, CITIZENSHIP	CITY Alfter-Oedekoven	STATE OR FOREIGN COUNTRY Germany	COUNTRY OF CITIZENSHIP Germany
	POST OFFICE ADDRESS	POST OFFICE ADDRESS Mühlenstr. 77	CITY Alfter-Oedekoven	STATE & ZIP CODE/COUNTRY Germany 53347

Combined Declaration for Patent Application and Power of Attorney (Continued) (Includes Reference to PCT International Applications)				Attorney's Docket 3245-704PL/S
203	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE, CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY
<p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.</p>				
SIGNATURE OF INVENTOR 201		SIGNATURE OF INVENTOR 202		SIGNATURE OF INVENTOR 203
DATE		DATE		DATE

008220" TELETYPE

By Express Mail # EL5138598750US · February 28, 2000

Attorney Docket # 3245-704PUS

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re National Phase PCT Application of

Reimar FINCK et al.

Serial No.: 09/423,911

Filed: November 16, 1999

For: Method and Installation for Producing Hot
Rolled Aluminium Tape Intended for Can
Making

**RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS UNDER
35 U.S.C. 371 IN THE U.S. DESIGNATED/ELECTED OFFICE (DO/EO/US)**

BOX PCT

Assistant Commissioner for Patents
Washington, D.C. 20231

S I R:

In response to the Notification of Missing Requirements dated January 6, 2000,

applicants submits herewith the following:

03/06/2000 UNWALKER 00000101 09423911

01 FC:154

In order to complete the filing of missing parts for the above-identified application,

applicants submit herewith the following:

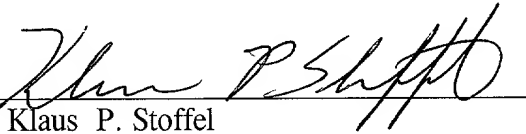
- [x] Executed Declaration and Power of Attorney
(attached to a copy of the application as filed).

- ☒ Check in the amount of \$130.00 to cover the late filing of the declaration
- ☒ Assignment of the invention to **Mannesmann AG, VAW aluminium AG, , , ,**
- ☒ Recordation cover sheet - PTO Form 1595
- ☒ Check in the amount of \$40.00 to cover the recordation fee
- ☐ Verified translation of the application into English
(a processing fee is required if filed later than 20 or 30 months from the priority date).
- ☐ Check in the amount of \$130.00 to cover the processing fee for providing
the translation of the application.
- ☐ Revised Drawing as requested.
- ☐
- ☒ Copy of form PCT/DOEO/905
- ☐ According to our records, we have not yet received form PCT/DOE0905.

If there are any additional fees that may be required at this time, the same may also
be charged to Deposit Account No. 03-2412.

Respectfully submitted,
COHEN, PONTANI, LIEBERMAN & PAVANE

By:



Klaus P. Stoffel
Reg. No. 31,668
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New York, New York 10176
(212) 687-2770

Dated: February 28, 2000